

Range Scenes

White-faced Herefords and their calves being driven by Utah cowboys

Photo — courtesy Utah Publicity Dept.







kingdom synonymous. It is to this period, ending in the last decades of the 1800's, that we now direct our attention. With the possibilities of grazing recognized and a source of cattle available in Texas, herds driven northward soon stocked the central and northern plains.

The demand for cattle for the populous East, cattle for western settlement, and cattle

for the Indian reservations created a seemingly inexhaustible market. Certain places became focal points for the collection of cattle for shipments to eastern markets, places which with the coming of the railroads were to gain importance and become urban centers.

Along with military sites and cattle towns, a third set of conditions based on a new agricultural frontier contributed to the growth

of new towns and cities on the lands west of the hundredth meridian.

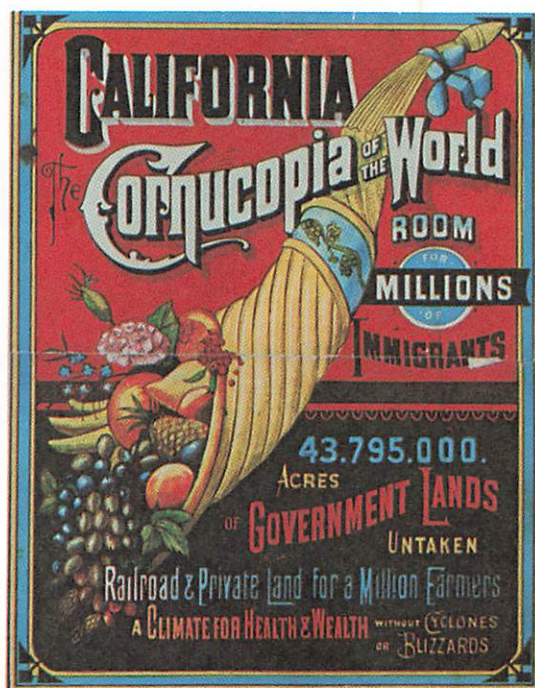
Windmills force the cowman to share his land

A lack of surface water severely restricted agricultural penetration of the dry West. In spite of optimistic reports of fertile soil and adequate rainfall (a complete reversal of the pessimistic view of a previous era) farming experiments were generally failures. As it so often happens, a new technology resulted in a new evaluation of the land. New techniques in drilling made possible the tapping of underground water sources that were previously out of reach of hand-dug wells. The windmill was introduced as a source of power to lift water to the surface. Windmills were first used by the railroads, which needed water for locomotive boilers and right-of-way settlements. Farmers soon adopted the new device. Spreading rapidly through the region, a multitude of windmills of varied size and design whirled on the steady winds of the plains. Barbed wire solved the problems of lack of wood and high fencing costs, and agricultural fields were saved from hungry, roving cattle.

With the better-watered lands of the East already settled, European immigrants and land-hungry Americans moved onto the public lands of the West. New towns sprang up, and a new and vast hinterland began to support a growing urban population.

Mining moves men further west

Mining discoveries in the Rocky Mountain region were the next factor contributing to the growth of towns in the West. The demands of transitory settlements for food and supplies encouraged the development of agricultural communities and the grazing industry. The more permanent mining settlements needed, in addition, heavy machinery necessary to

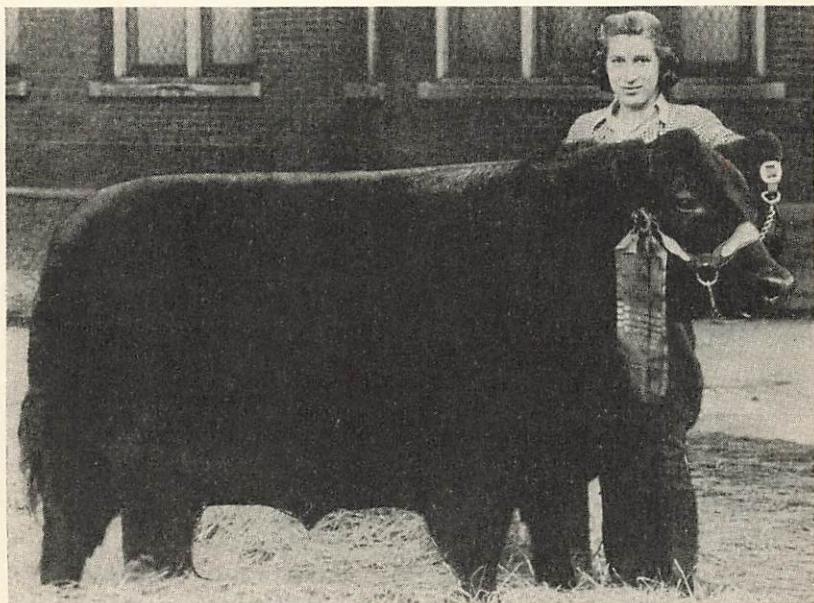


The advertisement above illustrates one of the means that railroads used to attract settlers to the West. Notice the appeal it has to the farmer, particularly. How did the railroads benefit from the sale of land other than receiving money from its sale?

Personality traits are of two kinds: (1) Hereditary characteristics are those which we inherit from our parents, and (2) acquired characteristics are those which we can develop. Although hereditary traits play a large part in personality, other desirable traits can be developed. Each of us can acquire, in a large measure, the traits we admire in others. It is chiefly because of this fact that we study personality.

Hereditry Underlies Personality

Are animals and plants more valuable than man? Is the quality of a bird, cat, dog, hog, cow, horse, apple, orange, potato, rose, or even the lowly sunflower of more vital concern than the quality of a man or of a woman? An impartial observer might be forced to conclude that we think so, for we spend a vast amount of time, energy, and money in trying to improve the strains of animals and



Courtesy, International Live Stock Exposition

Animal husbandmen are constantly improving the breeds of cattle by bringing out the desired characteristics. This prize steer was bred for its beef-producing qualities. It won for its owner, a high-school girl, the grand prize at the International Live Stock Exposition.

plants. But we sit, nearly silent and unprotesting, while man goes on generation after generation pouring into the stream of life individuals who are from the poorer strains. Many of these have such poor inborn qualities that they can never develop into satisfactory personalities.

Our lack of an effective program for improving the inherited qualities of the peoples of the world does not mean that all of us have believed heredity did not count. Since ancient times, an attempt has been made to improve the inherited qualities of man. The ancient Greek philosopher Plato complained in his book, *The Republic*, that we spent much effort in improving the breed of dogs and birds, but neglected to improve human heredity. Plato suggested an ideal state in which a strict program for improving hereditary traits was to be enforced: "The best of either sex should be united with the best as often, and the inferior with the inferior as seldom, as possible." Fortunately the importance of heredity is now beginning to receive much attention from the scientists, the general public, and the lawmakers.

The sprout develops into an oak, hickory, or elm, because the parent tree was an oak, hickory, or elm. It has passed on certain qualities to the sprout. The draft horse differs from the race horse, the Hereford cow from the Jersey, the bulldog from the fox terrier, because the parents of each are different. Heredity in man is as important as in any other organism, and many important traits are passed on from parent to child. The shape of the head, the color and texture of hair, deafness, dumbness, feeble-mindedness, mental disease, superior intelligence, epilepsy, nervousness, and many other traits are often inherited.

An Austrian monk, Gregor Mendel, discovered that many traits are inherited, and that the inherited traits appear in succeeding generations according to a definite law, which came to be known as Mendel's Law. Mendel discovered the principles of his law by experimenting with different varieties of peas in the garden of the monastery. Many other scientists have proved the truth of the law by experimenting with plants and animals.

Mendel found that if the characteristic of one parent is different from that of the other parent, the characteristic of one parent will show in the development of the offspring, while the characteristic of the other parent will not show. For instance, when a tall



PHOTOGRAPHY/ GARY McKELLAR

FFA members push and pull animal on portable scale at Payson High School agriculture building.

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at restrictions and even arrest.

Joint effort to colonize Mars called a good alternative to arms race

LOGAN (AP) — NASA has delayed plans for a Martian exploration, but a joint U.S.-Soviet effort to colonize the red planet is a good alternative to the present nuclear arms race, a scientist says.

James French, an American Rocket Co. engineer who participated in Utah State University's Engineering Week activities, spent two decades with TRW Systems, participating in development of the Lunar Module Descent Engine and was involved in the Mariner, Viking and Voyager missions.

"NASA has postponed its planned Mars observer mission for another two years, but a lot of us are lobbying to get it back to the original 1990 launch date," he said. "Rather than go-

ing on the shuttle, we prefer the Titan III expendable launch vehicle, and we would like to see efforts made to get the Soviets to join us."

French called for establishment of a permanent base on Mars, instead of using several independent one-shot missions similar to the lunar exploration of the 1960s and 1970s.

"There is everything on Mars that humankind needs to survive, and with the technology we have today the U.S. is more ready to inhabit Mars than it was to land on the moon in 1962," he said.

French said a mission to Mars would use three space vehicles, making artificial gravity to prevent astronauts from becoming ill when they returned to a weighted environment.

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